What Is Claimed Is:

1. A method of identifying LPXTG-containing cell wall-anchored surface proteins from Gram positive bacteria that bind to an extracellular matrix molecule comprising searching a database of sequence information to identify a putative protein sequence from Gram positive bacteria having an LPXTG-motif in its C-terminal region, analyzing the identified sequence to determine the presence of one or more IG-like fold regions, and positively identifying said putative protein sequence as an LPXTG-containing cell wall-anchored surface protein that binds to an extracellular matrix molecule if that sequence has one or more IG-like fold regions of an LPXTG-containing cell wall-anchored surface protein that binds to an extracellular matrix molecule.

2. The method according to Claim 1 wherein the Gram positive bacteria is from a genus selected from the group consisting of *Enterococcus, Streptococcus, Staphylococcus* and *Bacillus.*

3. The method according to Claim 1 wherein the Gram positive bacteria is from a species selected from the group consisting of *Enterococcus faecalis, Enterococcus faecium, Streptococcus pneumoniae, Streptococcus pneumoniae, Streptococcus mutans, Staphylococcus aureus, Staphylococcus epidermidis,* and *Bacillus anthracis.*

4. The method according to Claim 1 wherein the Ig-like folds of the putative LPXTG-containing protein sequence are determined by comparing the sequence of that protein with the sequence of Ig-like folds in a known LPXTG-containing cell wall-anchored surface protein that binds to an extracellular matrix molecule

5. The method according to Claim 4 wherein the putative LPXTG-containing protein is compared to a known LPXTG-containing protein using a probability value based on the comparison of the sequences, and wherein a putative LPXTG-containing protein is identified as an LPXTG-containing cell wall-anchored surface protein that binds to an extracellular matrix molecule when the probability value is <0.25.

6. An isolated protein identified by the method of Claim 1.

7. The isolated protein according to Claim 6 wherein the protein is selected from the group consisting of Gram positive bacterial proteins identified as SP0368, SP0462, SP0463, SP0464; EF2224, EF1091, EF1092, EF1093, EF3023, EF1269, EF0089, EF1824, EF1075, EF1074, EF1651, SMU.610, SMU.987, SMU.63c, SA2447, SA2290, SA2291, SA2423, SA0742, SA0519, SA0520, SA0521, BA0871, BA5258, SERP_GSE_14_6.AA, SERP_GRE_2_50.AA, SERP_GSE_9_28.AA, SEPN_5_124.AA, and SEPN_8_63.AA.

8. An isolated A domain of the protein according to Claim 6.

9. An isolated antibody that can bind to a protein according to Claim 6.

10. An isolated nucleic acid sequence encoding the protein according to Claim 6.

11. A method of identifying LPXTG-containing cell wall-anchored surface proteins from Gram positive bacteria that bind to an extracellular matrix molecule comprising searching a database of sequence information to identify a putative protein sequence from Gram positive bacteria having an LPXTG-motif in its C-terminal region, analyzing the identified sequence to determine if said sequence has a signal peptide at the N-terminus, the LPXTG-motif close to the

C-terminus followed by a hydrophobic transmembrane segment, and several positively charged residues at the C-terminus, and positively identifying said putative protein sequence as an LPXTG-containing cell wall-anchored surface protein that binds to an extracellular matrix molecule if that sequence has a signal peptide at the N-terminus, the LPXTG-motif close to the C-terminus followed by a hydrophobic transmembrane segment, and several positively charged residues at the C-terminus .

12. An isolated protein identified by the method of Claim 11.

13. An isolated A domain of the protein according to Claim 12.

14. An isolated antibody that can bind to a protein according to Claim 12.

15. An isolated nucleic acid sequence encoding the protein according to Claim 11.

16. An isolated LPXTG-containing cell wall-anchored surface protein from Gram positive bacteria or A domain from said protein having an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NOS:20-24 and the A domains of said sequences.

17. An isolated nucleic acid sequence encoding the protein according to Claim 16.

18. An isolated nucleic acid encoding an PXTG-containing cell wall-anchored surface protein from Gram positive bacteria or A domain from said protein having a nucleic acid sequence selected from the group consisting of SEQ

ID NO: 8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, and SEQ ID NO:18, or degenerates thereof.

19. An isolated antibody that can bind to a protein according to Claim 16.

20. The antibody according to Claim 19 wherein the antibody is a monoclonal antibody.

21. The antibody according to Claim 19 selected from the group consisting of single chain, chimeric, murine, humanized and human monoclonal antibodies.

22. The antibody according to Claim 19, wherein said antibody treats or prevents a Gram positive bacterial infection in a human or animal.

23. The antibody according to Claim 19, wherein said antibody is suitable for parenteral, oral, intranasal, subcutaneous, aerosolized or intravenous administration in a human or animal.

24. Isolated antisera containing an antibody according to Claim 19.

25. A diagnostic kit comprising an antibody according to Claim 19 and means for detecting binding by that antibody.

26. A diagnostic kit according to Claim 25 wherein said means for detecting binding comprises a detectable label that is linked to said antibody.

27. A method of treating or preventing a infection of a Gram positive bacteria comprising administering to a human or animal patient an effective amount of an antibody according to Claim 19.

28. A pharmaceutical composition comprising an effective amount of the antibody of Claim 19 and a pharmaceutically acceptable vehicle, carrier or excipient.

29. A pharmaceutical composition comprising an immunogenic amount of the protein or peptide of Claim 8 and a pharmaceutically acceptable vehicle, carrier or excipient.

30. A pharmaceutical composition comprising an immunogenic amount of the protein or peptide of Claim 16 and a pharmaceutically acceptable vehicle, carrier or excipient.

31. A method of treating or preventing a infection of a Gram positive bacteria comprising administering to a human or animal patient an effective amount of an antibody according to Claim 19.

32. A method of diagnosing an infection caused by a Gram positive bacteria comprising introducing the antibody according to Claim 19 into a sample of biological material suspected of having such an infection and determining if said antibody binds with antigens in said sample.

33. A method of eliciting an immunogenic reaction in a human or animal comprising administering to said human or animal an immunologically effective amount of the protein according to Claim 8.

34. A vaccine comprising an immunogenic amount of the protein according to Claim 8 and a pharmaceutically acceptable vehicle, carrier or excipient.

35. A method of assaying for the presence of antigens from Gram positive bacteria in a biological sample suspected of containing said antigens comprising (a) simultaneously forming a mixture comprising the sample, together with an antibody according to Claim 19 in the form of either a solid phase immobilized antibody bound to a solid phase immunoadsorbent or a soluble labeled antibody; (b) incubating the mixture formed in step (a) for a time and under conditions sufficient to allow antigen in the sample to bind to either said immobilized or said labeled antibody; and (c) detecting either labeled antibody bound to the solid phase immunoadsorbent or detecting the labeled soluble antibody.

36. A method according to Claim 35 further including a step of washing, stirring, shaking or filtering.

37. A method of monitoring the level of Gram positive bacteria antigens in a human or animal patient suspected of containing said antigens comprising (a) obtaining a biological sample from said human or animal patient; (b) introducing into said sample either a determinable level of an antibody according to Claim 19, (c) incubating the sample when combined with the antibodies for a time and under conditions sufficient to allow the antigens and antibodies to bind; and (d) monitoring the level of antigens in the sample by determining the level of antigen-antibody binding which will reflect the level of Gram positive bacterial antigens which are in the sample.

38. A pharmaceutical composition comprising an immunogenic amount of the protein according to Claim 16 and a pharmaceutically acceptable vehicle, carrier or excipient.

39. A method of diagnosing an infection caused by a Gram positive bacteria comprising introducing the protein according to Claim 16 into a sample of biological material suspected of having such an infection and determining if said protein binds to antibodies in said sample.

5

40. A method of eliciting an immunogenic reaction in a human or animal comprising administering to said human or animal an immunologically effective amount of the protein according to Claim 16.